Complete Summary

GUIDELINE TITLE

Basic guidelines for diabetes care.

BIBLIOGRAPHIC SOURCE(S)

Diabetes Coalition of California, California Diabetes Program. Basic guidelines for diabetes care. Sacramento (CA): Diabetes Coalition of California, California Diabetes Program; 2005. 16 p.

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Diabetes Coalition of California, California Diabetes Prevention and Control Program. Basic guidelines for diabetes care. Sacramento (CA): California Diabetes Prevention and Control Program, Department of Health Services; 2003. 26 p.

These guidelines are updated annually.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

- Type 1 diabetes mellitus
- Type 2 diabetes mellitus
- Gestational diabetes

GUIDELINE CATEGORY

Counseling
Evaluation
Management
Screening

CLINICAL SPECIALTY

Endocrinology
Family Practice
Internal Medicine
Obstetrics and Gynecology
Pediatrics

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

- To present basic guidelines for diabetes care
- To update the 2003 version of these basic guidelines

TARGET POPULATION

Adults, children, and adolescents with type 1 and type 2 diabetes mellitus

INTERVENTIONS AND PRACTICES CONSIDERED

1. Physical and emotional assessment, including blood pressure, weight, height and body mass index (BMI) for age (for children), foot exam (for adults), dilated eye exams (by trained expert), screening for depression, dental exam
2. Laboratory examination, including hemoglobin A1c (A1C) measurement, microalbuminuria (albumin/creatinine ratio) assessment; blood lipids measurement (for adults)
3. Self-management training, including management principles and complications, self-glucose monitoring, medical nutrition therapy (physical activity, weight management)
4. Interventions, including preconception, pregnancy, and postpartum counseling and management, aspirin therapy, smoking cessation, immunizations (influenza, pneumococcal)

MAJOR OUTCOMES CONSIDERED

Not stated

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Pertinent articles for review were identified from Medline searches, periodicals, and the reference lists from the previous year's Basic Guidelines for Diabetes Care.

The article list for each was then reviewed for completeness. Articles from older or lower-rated studies were removed from the list if a more current, higher quality study on the list contributed the same or new information.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Experts in diabetes care reviewed and rated the body of evidence using a system adopted from the American Diabetes Association (ADA) grading system for clinical practice recommendations. The system rates practice recommendations based on the level of evidence for the recommendation and the likelihood of clinical benefit. A is the highest rating and "expert consensus" is the lowest.

A. Clear evidence from well-conducted, generalizable, randomized controlled trials that are adequately powered, including:
    - Evidence from a well-conducted multi-center trial
    - Evidence from a meta-analysis that incorporated quality ratings in the analysis
    - Compelling non-experimental evidence, i.e. "all or none" rule developed by the Center for Evidence Based Medicine at Oxford

    Supportive evidence from well-conducted randomized controlled trials that are adequately powered including:

    - Evidence from a well-conducted trial at one or more institutions
    - Evidence from a meta-analysis that incorporated quality ratings in the analysis

B. Supportive evidence from well-conducted prospective cohort studies, including:
    - Evidence from a well-conducted prospective study or registry
    - Evidence from a well-conducted meta-analysis of cohort studies

    Supportive evidence from a well-conducted case control study

C. Supportive evidence from poorly controlled or uncontrolled studies
    - Evidence from randomized clinical trials with one or more major or three or more minor methodological flaws that could invalidate the results
    - Evidence from observational studies with high potential for bias (such as case series with comparison with historical controls)
    - Evidence for case series or case report
    - Conflicting evidence with the weight of evidence supporting the recommendation

D. Expert consensus or clinical experience

Diabetes Care, Vol 28, Supplement 1, January 2005

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

The guideline developers reviewed published cost analyses.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Physical and Emotional Assessment

Blood Pressure, Weight: Every visit. Blood pressure (BP) target goal <130/80 mmHg. For children: Add height, normal body mass index (BMI) for age, plot on 2001 Centers for Disease Control and Prevention (CDC) growth charts; blood pressure <90th percentile age standard.

Foot Exam (for adults): Thorough visual inspection every diabetes care visit; pedal pulses, neurological exam yearly.

Dilated Eye Exam (by trained expert): Type 1: Five years post diagnosis, then every year. Type 2: Shortly after diagnosis, then every year. Note: Internal quality assurance data may be used to support less frequent testing.

Depression: Probe for emotional/physical factors linked to depression yearly; treat aggressively with counseling, medication, and/or referral.

Dental: Exams at least twice yearly. Prophylaxis two to four times a year.

Lab Exam

A1C (Hemoglobin A1c): Quarterly, if treatment changes or if not meeting goals; One or two times/year if stable. Target goal <7.0% or <1% above lab norms. For children: Modify as necessary to prevent significant hypoglycemia.

Microalbuminuria (Albumin/Creatinine Ratio): Type 1: Begin with puberty once the duration of diabetes is more than five years unless proteinuria has been documented. Type 2: Begin at diagnosis, then every year unless proteinuria has been documented.

Blood Lipids (for adults): On initial visit, then yearly for adults. Target goals (mg/dL): cholesterol, triglycerides <150; low-density lipoproteins (LDL) <100; high-density lipoproteins (HDL) >40 for men; high-density lipoproteins >50 for women.

Self-Management Training

Management Principles and Complications: Initially and yearly: Assess knowledge of diabetes, medications, self-monitoring, acute/chronic complications, and problem-solving skills. Ongoing: Screen for problems with and barriers to self-care; assist patient to identify achievable self-care goals. For children: As appropriate for developmental stage.

Self-Glucose Monitoring: Type 1: Typically test four times a day. Type 2 and others: As needed to meet treatment goals.

Medical Nutrition Therapy (by trained expert): Initially: Assess needs/condition; assist patient in setting nutrition goals. Ongoing: Assess progress toward goals; identify problem areas.

Physical Activity: Initially and ongoing: Assess and prescribe physical activity based on patient's needs/condition.

Weight Management: Initially and ongoing: Must be individualized for patient.

Interventions

Preconception, Pregnancy, and Postpartum Counseling and Management: Consult with high-risk, multidisciplinary perinatal/neonatal programs and providers where available (e.g., California Diabetes and Pregnancy Program "Sweet Success"). For adolescents: Age appropriate counseling advisable, beginning with puberty.

Aspirin Therapy: 81 to 325 mg/day or 325 mg every other day in adults as primary and secondary prevention of cardiovascular disease, unless contraindicated.

Smoking Cessation: Screen, advise, access readiness to quit, and assist at every diabetes care visit, adjusting the frequency as appropriate to the patient's response. Refer to California Smokers' Helpline 1-800-NO-BUTTS.

Immunizations: Influenza and pneumococcal, per CDC recommendations.

Explanatory Notes

It is assumed that the following are routinely occurring in the medical setting:

1. A history and physical appropriate for a person with diabetes are performed. Visits are sufficiently frequent to meet the patient's needs and treatment goals.
2. Abnormal physical or laboratory findings result in appropriate and individualized interventions.
3. Expert multi-disciplinary health professionals provide self-management training. For children/adolescents and their families, training from a diabetes team or team member with experience in child and adolescent diabetes is strongly recommended to begin at diagnosis.
4. Physicians should consult current references for normal values and for appropriate treatment goal values, both for children and adults.
5. Specialists should be consulted when patients are unable to achieve treatment goals in a reasonable time frame, when complications arise, or whenever the primary care physician deems it appropriate. Under similar circumstances, children/adolescents should be referred to specialists who have expertise in managing children and adolescents with diabetes.

Additional comments on specific items included in the guidelines:

Psychosocial assessment: Assess barriers to self-care: common environmental obstacles, cultural issues, beliefs and feelings about diabetes, disorders of eating and mood, life stresses, and substance use.

A1C (Hemoglobin A1c)/Self-Glucose Monitoring: Certification by the National Glycohemoglobin Standardization Program as traceable to the Diabetes Control Complications Trial (DCCT) reference ensures portability of A1C results. Verify that the laboratory is certified in this method. A1C target goals should be achieved gradually over time. Target goals should be less stringent for children, the elderly, and other fragile patients. Clinicians have found that making the patient aware of his/her A1C values and their significance helps motivate the patient toward improved glycemic control. This principle also applies to self-glucose monitoring. Target goals should be individualized for each patient.

Microalbuminuria: Screening is not needed if proteinuria has been documented. See Screening and Initial Management of Diabetic Microalbuminuria and Nephropathy algorithm in original guideline document.

Blood Lipids: Abnormal blood lipids are often under-treated. An active, progressive treatment and monitoring plan should be instituted.

Dental: Physicians are urged to recommend dental care as a part of basic diabetes care.

Children/Adolescents: For specific diabetes care recommendations see references in the original guideline document.

Aspirin (ASA): Women with diabetes are high risk for cardiovascular disease and therefore 81mg daily is indicated. Doses ASA >81mg daily have increased bleeding risk and no proven additional benefits.

CLINICAL ALGORITHM(S)

The guideline contains clinical algorithms for:

- Therapy for Glycemic Control of Type 2 Diabetes Mellitus in Adults*
- Screening and Initial Management of Diabetic Microalbuminuria and Nephropathy*
- Foot Care for People with Diabetes
- Gestational Diabetes (GDM) Screening, Diagnosis, and Management**
- Lipid Management in People with Diabetes

* These algorithms are adapted from the American Diabetes Association (ADA) Clinical Practice Recommendations, 2005

** This algorithm is adapted from the American Diabetes Association (ADA) Clinical Practice Recommendations, 2003.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

An annotated bibliography, categorizing the references used to support the inclusion of specific items, is provided in the original guideline document. Each reference is rated according to the scheme listed above (see "Rating Scheme for the Strength of the Evidence"). In general, items in the guidelines are included based on one or more of the following criteria:

- Published evidence demonstrated either the efficacy or the effectiveness of the item.
- Published studies on cost-identification, cost-effectiveness, or cost-benefit analysis of the item demonstrated favorable economic results.
- A preponderance of expert opinion held that the item is considered to be essential to the care of persons with diabetes.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Prevention or delay of diabetic morbidity and mortality

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- These guidelines are intended for use by primary care professionals.
- These guidelines are meant to be basic guidelines, not enforceable standards.
- Internal quality assurance data may be used to support less frequent testing.
- These guidelines, developed by local and national diabetes experts, are consistent with American Diabetes Association Clinical Practice Recommendations.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Staff from the Diabetes Prevention and Control Program meet with payors, providers, and managed care organizations statewide to implement these guidelines. Implementation is also encouraged through the California Cooperative Healthcare Reporting Initiative's (CCHRI) distribution of the guidelines to help change primary care provider practice.

IMPLEMENTATION TOOLS

Chart Documentation/Checklists/Forms
Clinical Algorithm
Foreign Language Translations
Patient Resources
Slide Presentation

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

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ADAPTATION

Some of the algorithms that accompany the "Basic Guidelines for Diabetes Care" were adapted by the Diabetes Coalition of California (DCC) from the American Diabetes Association (ADA) Clinical Practice Recommendations, 2003 and 2005.

DATE RELEASED

1999 Jan (revised 2005 Jan)

GUIDELINE DEVELOPER(S)

California Diabetes Program - Private Nonprofit Organization
Diabetes Coalition of California - Private Nonprofit Organization

SOURCE(S) OF FUNDING

Not stated

GUIDELINE COMMITTEE

Diabetes Coalition of California Guidelines Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

ENDORSER(S)

American Diabetes Association - Professional Association
Blue Cross of California State Sponsored Program - Managed Care Organization
California Cooperative Healthcare Reporting Initiative - Professional Association
Conference of Local Health Offices (California) - Independent Expert Panel
Health Resource Services Administration Health Disparities Collaborative - Federal Government Agency [U.S.]
Hill Physicians Group - Professional Association
Lumetra - Professional Association
Medical Board of California - State/Local Government Agency [U.S.]
Pacific Business Group on Health - Private For Profit Organization

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These guidelines are updated annually.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the California Diabetes Program Web site.

Print copies: Available from the California Department of Health Services, Diabetes Prevention and Control Program, 1616 Capitol Avenue, MS 7211, PO Box 997413, Sacramento, CA 95899-7413; telephone, (916) 552-9888; fax, (916) 552-9888; Web site: www.caldiabetes.org.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Diabetes Health Record, a self-management tool for patients available in 14 languages. Electronic copies: Available from the California Diabetes Program Web site.
- Professional Guidelines Presentation: a PowerPoint presentation developed for the medical professional to inform health care providers and organizations about the Basic Guidelines for Diabetes Care. Electronic copies: Available from the California Diabetes Program Web site

Print copies: Available from the California Department of Health Services, Diabetes Prevention and Control Program, 1616 Capitol Avenue, MS 7211, PO Box 997413, Sacramento, CA 95899-7413; telephone, (916) 552-9888; fax, (916) 552-9888; Web site: www.caldiabetes.org.

Additionally, a Diabetes Foot Exam form, a Diabetes Eye Exam Consultation Request and Report form, and a Diabetes Flow Sheet can be found in the original guideline document.

Additional tools and resources are available from the California Diabetes Program Web site.

PATIENT RESOURCES

The following are available

- Patient/Consumer Fact Sheets: a series of simple fact sheets developed to help patients on a number of diabetes topics. Electronic copies are available from the California Diabetes Program Web site.
- Diabetes and Heart Disease in Hispanics: a fact sheet developed to provide information about diabetes and heart disease in the Hispanic population. Electronic copies are available from the California Diabetes Program Web site.
- Take Charge! Presentation: a PowerPoint presentation developed for non-professionals to educate people with diabetes about the Basic Guidelines for Diabetes Care and how to use the Diabetes Health Record. Electronic copies are available from the California Diabetes Program Web site.

Print copies: Available from the California Department of Health Services, Diabetes Prevention and Control Program, 1616 Capitol Avenue, MS 7211, PO Box 997413, Sacramento, CA 95899-7413; telephone, (916) 552-9888; fax, (916) 552-9888; Web site: www.caldiabetes.org.

NGC STATUS

This summary was completed by ECRI on January 10, 2000. The information was verified by the guideline developer as of January 31, 2000. This summary was updated July 9, 2001. This summary was updated again on October 23, 2002, and verified by the guideline developer on December 5, 2002. This summary was updated again on May 4, 2004. The updated information was verified by the guideline developer on July 20, 2004. This summary was updated on December 9, 2005. The updated information was verified by the guideline developer on January 10, 2006.

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